

GLOSSARY

Mathematical terms and expressions used in this booklet.

Set notation

A set is a collection of objects enclosed between braces $\{ \dots \}$.

Example:

The set of the first five even numbers is $\{2, 4, 6, 8, 10\}$.

Sets of numbers

$N = \{1, 2, 3, 4, \dots\}$

$W = \{0, 1, 2, 3, 4, \dots\}$

$I = \{\dots, -3, -2, -1, 0, 1, 2, 3, \dots\}$

Inequality signs

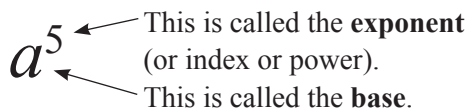
$<$ is less than

$\leq$ is less than or equal to

$>$ is greater than

$\geq$ is greater than or equal to

Powers (exponents)


This is called the **exponent** (or index or power).
This is called the **base**.

Example: $a^5 = a \times a \times a \times a \times a$

The distributive rule

$$\begin{aligned} a(b + c) &= a \times b + a \times c \\ &= ab + ac \end{aligned}$$

ALGEBRAIC TERMINOLOGY

Pronumeral

A letter that stands for a number (also often called a variable or an unknown).

Term

A group of numbers and letters.

Example: $15abc$, which stands for

$$15 \times a \times b \times c$$

Expression

A collection of terms.

Example: $3ab + 2b^2 - 6c$

Sentence

A mathematical statement (usually involving symbols).

Example: $2a + 3b = 108$

Closed sentence

A sentence that is either true or false.

Example: $1 + 1 = 2$

Open sentence

A sentence that contains a pronumeral.

Its truthfulness is dependent on the value of the variable.

Example: $2x - 1 > 11$

Equation

An open sentence containing an equals sign.

Example: $5x + 53 = 208$

Rational number (fraction)

A number expressed expressed in the form $\frac{a}{b}$ where a and b are integers and $b \neq 0$.

Equivalent fractions

These are different names for the same fraction.

Example: $\frac{6}{8}$ and $\frac{3}{4}$

Reciprocal (of a fraction)

This is obtained by turning a fraction upside down.

Example: The reciprocal of $\frac{5}{8}$ is $\frac{8}{5}$
(The reciprocal of n is $\frac{1}{n}$).